WHAT IS CLAIMED IS:

1 A zeolite having a mole ratio greater than about 20 of an oxide of a first tetravalent element to an oxide of a second tetravalent element which is different from said first tetravalent element, trivalent element, pentavalent element or mixture thereof and having, after calcination, the X-ray diffraction lines of Table II.

2. A zeolite having a mole ratio greater than about 20 of an oxide selected from the group consisting of silicon oxide, germanium oxide and mixtures thereof to an oxide selected from aluminum oxide, gallium oxide, iron oxide, boron oxide, titanium oxide, indium oxide, vanadium oxide and mixtures thereof, and having, after calcination, the X-ray diffraction lines of Table II.

3. A zeolite according to Claim 2 wherein the oxides comprise silicon oxide and aluminum oxide.

4. A zeolite according to Claim 2 wherein the oxides comprise silicon oxide and boron oxide.

5. A zeolite according to Claim 1 wherein said zeolite is predominantly in the hydrogen form.

6. A zeolite according to Claim 1 wherein said zeolite is substantially free of acidity.

7. A zeolite having a composition, as synthesized and in the anhydrous state, in terms of mole ratios as follows:

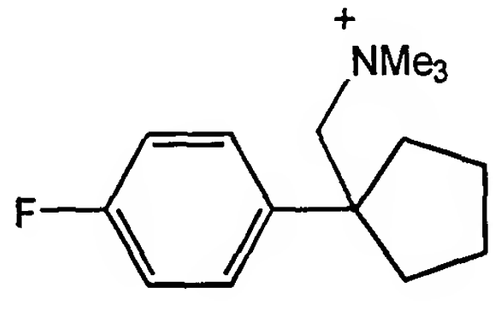
YO_2/W_cO_d	20-150
$M_{2/n}/YO_2$	0.01-0.03
Q/YO_2	0.02-0.05

wherein Y is silicon, germanium or a mixture thereof; W is aluminum, gallium, iron, boron, titanium, indium, vanadium or mixtures thereof; c is 1 or 2; d is 2 when c is 1 or d is 3 or 5 when c is 2; M is an alkali metal cation, alkaline earth metal cation or mixtures thereof; n is the valence of M; and Q is at least one phenylcycloalkylmethyl ammonium cation

8. A zeolite according to Claim 7 wherein W is aluminum and Y is silicon.

9. A zeolite according to Claim 7 wherein W is boron and Y is silicon.

10. A zeolite according to Claim 7 wherein Q has the following structure:



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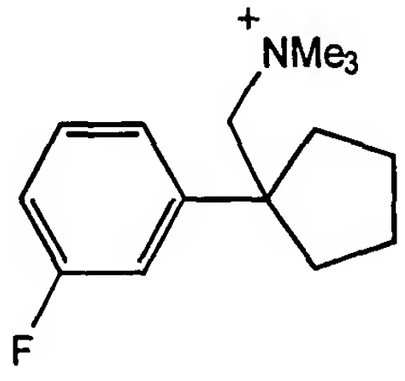

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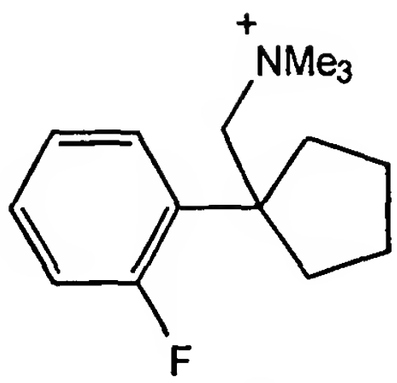

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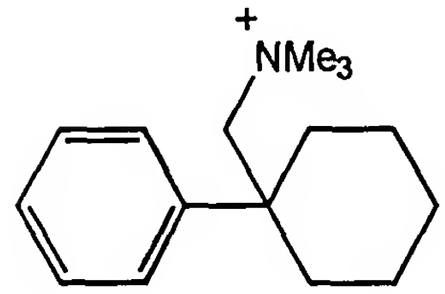

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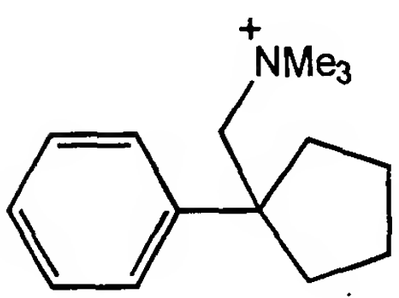


11. A method of preparing a crystalline material comprising an oxide of a first tetravalent element and an oxide of a second tetravalent element which is different from said first tetravalent element, trivalent element, pentavalent element or mixture thereof, said method comprising contacting under crystallization conditions sources of said oxides and a templating agent comprising a phenylcycloalkylmethyl ammonium cation.

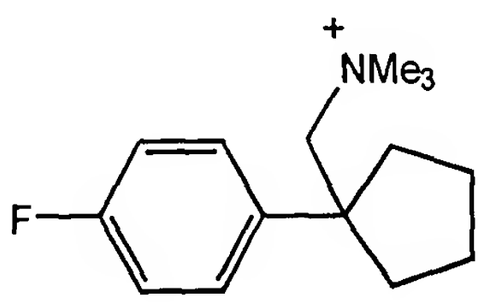
12. The method according to Claim 11 wherein the first tetravalent element is selected from the group consisting of silicon, germanium and combinations thereof.

13. The method according to Claim 11 wherein the second tetravalent element, trivalent element or pentavalent element is selected from the group consisting of aluminum, gallium, iron, boron, titanium, indium, vanadium and combinations thereof.

14. The method according to Claim 13 wherein the second tetravalent element or trivalent element is selected from the group consisting of aluminum, boron, titanium and combinations thereof.

15. The method according to Claim 14 wherein the first tetravalent element is silicon.

16. The method according to Claim 11 wherein the templating agent has the following structure:



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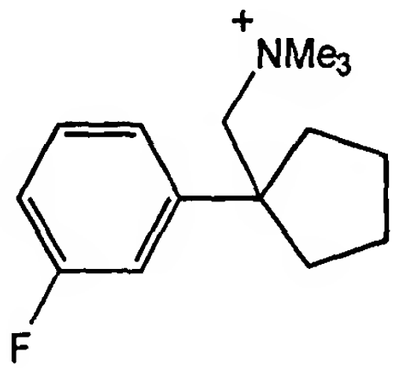

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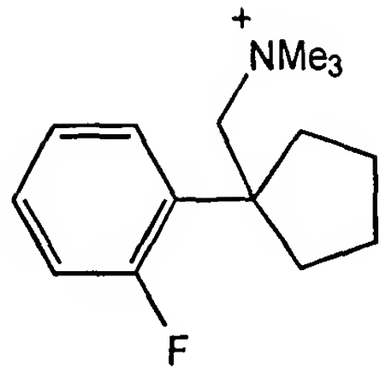

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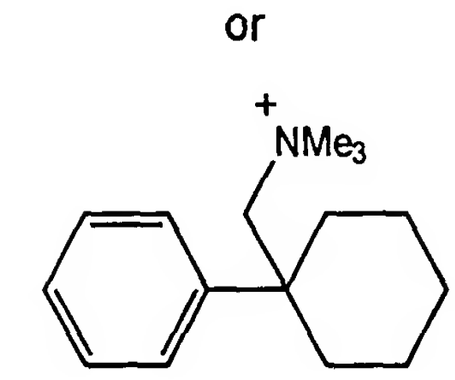

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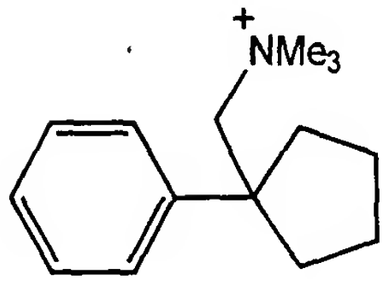

17. The method of Claim 11 wherein the crystalline material has, after calcination, the X-ray diffraction lines of Table II.

18. A process for converting hydrocarbons comprising contacting a hydrocarbonaceous feed at hydrocarbon converting conditions with a catalyst comprising a zeolite having a mole ratio greater than about 20 of an oxide of a first tetravalent element to an oxide of a second tetravalent element which is different from said first tetravalent element, trivalent element, pentavalent element or mixture thereof and having, after calcination, the X-ray diffraction lines of Table II.

19. The process of Claim 18 wherein the zeolite is predominantly in the hydrogen form.

20. The process of Claim 18 wherein the zeolite is substantially free of acidity.

21. The process of Claim 18 wherein the process is a hydrocracking process comprising contacting the catalyst with a hydrocarbon feedstock under hydrocracking conditions.

22. The process of Claim 21 wherein the zeolite is predominantly in the hydrogen form.

23. The process of Claim 18 wherein the process is a dewaxing process comprising contacting the catalyst with a hydrocarbon feedstock under dewaxing conditions.

24. The process of Claim 23 wherein the zeolite is predominantly in the hydrogen form.

25. The process of Claim 18 wherein the process is a process for improving the viscosity index of a dewaxed product of waxy hydrocarbon feeds comprising contacting the catalyst with a waxy hydrocarbon feed under isomerization dewaxing conditions.

26. The process of Claim 25 wherein the zeolite is predominantly in the hydrogen form.

27. The process of Claim 18 wherein the process is a process for producing a C_{20}+ lube oil from a C_{20}+ olefin feed comprising isomerizing said olefin feed under isomerization conditions over the catalyst.

28. The process of Claim 27 wherein the zeolite is predominantly in the hydrogen form.

29. The process of Claim 27 wherein the catalyst further comprises at least one Group VIII metal.

30. The process of Claim 18 wherein the process is a process for catalytically dewaxing a hydrocarbon oil feedstock boiling above about 350 F and containing straight chain and slightly branched chain hydrocarbons comprising contacting said hydrocarbon oil feedstock in the presence of added hydrogen gas at a hydrogen pressure of about 15-3000 psi under dewaxing conditions with the catalyst.

31. The process of Claim 30 wherein the zeolite is predominantly in the hydrogen form.

32. The process of Claim 30 wherein the catalyst further comprises at least one Group VIII metal.

33. The process of Claim 30 wherein said catalyst comprises a layered catalyst comprising a first layer comprising the zeolite and at least one Group VIII metal, and a second layer comprising an aluminosilicate zeolite which is more shape selective than the zeolite of said first layer.

34. The process of Claim 18 wherein the process is a process for preparing a lubricating oil which comprises:

hydrocracking in a hydrocracking zone a hydrocarbonaceous feedstock to obtain an effluent comprising a hydrocracked oil; and

catalytically dewaxing said effluent comprising hydrocracked oil at a temperature of at least about 400 F and at a pressure of from about 15 psig to about 3000 psig in the presence of added hydrogen gas with the catalyst.

35. The process of Claim 34 wherein the zeolite is predominantly in the hydrogen form.

36. The process of Claim 34 wherein the catalyst further comprises at least one Group VIII metal.

37. The process of Claim 18 wherein the process is a process for isomerization dewaxing a raffinate comprising contacting said raffinate in the presence of added hydrogen under isomerization dewaxing conditions with the catalyst.

38. The process of Claim 37 wherein the zeolite is predominantly in the hydrogen form.

39. The process of Claim 37 wherein the catalyst further comprises at least one Group VIII metal.

40. The process of Claim 37 wherein the raffinate is bright stock.

41. The process of Claim 18 wherein the process is a process for increasing the octane of a hydrocarbon feedstock to produce a product having an

increased aromatics content comprising contacting a hydrocarbonaceous feedstock which comprises normal and slightly branched hydrocarbons having a boiling range above about 40 C and less than about 200 C under aromatic conversion conditions with the catalyst.

42. The process of Claim 41 wherein the zeolite is substantially free of acid.

43. The process of Claim 41 wherein the zeolite contains a Group VIII metal component.

44. The process of Claim 18 wherein the process is a catalytic cracking process comprising contacting a hydrocarbon feedstock in a reaction zone under catalytic cracking conditions in the absence of added hydrogen with the catalyst.

45. The process of Claim 44 wherein the zeolite is predominantly in the hydrogen form.

46. The process of Claim 44 wherein the catalyst additionally comprises a large pore crystalline cracking component.

47. The process of Claim 18 wherein the process is an isomerization process for isomerizing C_4 to C_7 hydrocarbons, comprising contacting a feed having normal and slightly branched C_4 to C_7 hydrocarbons under isomerizing conditions with the catalyst.

48. The process of Claim 47 wherein the zeolite is predominantly in the hydrogen form.

49. The process of Claim 47 wherein the zeolite has been impregnated with at least one Group VIII metal.

50. The process of Claim 47 wherein the catalyst has been calcined in a steam/air mixture at an elevated temperature after impregnation of the Group VIII metal.

51. The process of Claim 49 wherein the Group VIII metal is platinum.

52. The process of Claim 18 wherein the process is a process for alkylating an aromatic hydrocarbon which comprises contacting under alkylation conditions at least a molar excess of an aromatic hydrocarbon with a C_2 to C_{20} olefin under at least partial liquid phase conditions and in the presence of the catalyst.

53. The process of Claim 52 wherein the zeolite is predominantly in the hydrogen form.

54. The process of Claim 52 wherein the olefin is a C_2 to C_4 olefin.

55. The process of Claim 54 wherein the aromatic hydrocarbon and olefin are present in a molar ratio of about 4:1 to about 20:1, respectively.

56. The process of Claim 54 wherein the aromatic hydrocarbon is selected from the group consisting of benzene, toluene, ethylbenzene, xylene, naphthalene derivatives, dimethylnaphthalene or mixtures thereof.

57. The process of Claim 18 wherein the process is a process for transalkylating an aromatic hydrocarbon which comprises contacting under

transalkylating conditions an aromatic hydrocarbon with a polyalkyl aromatic hydrocarbon under at least partial liquid phase conditions and in the presence of the catalyst.

58. The process of Claim 57 wherein the zeolite is predominantly in the hydrogen form.

59. The process of Claim 57 wherein the aromatic hydrocarbon and the polyalkyl aromatic hydrocarbon are present in a molar ratio of from about 1:1 to about 25:1, respectively.

60. The process of Claim 57 wherein the aromatic hydrocarbon is selected from the group consisting of benzene, toluene, ethylbenzene, xylene, or mixtures thereof.

61. The process of Claim 57 wherein the polyalkyl aromatic hydrocarbon is a dialkylbenzene.

62. The process of Claim 18 wherein the process is a process to convert paraffins to aromatics which comprises contacting paraffins under conditions which cause paraffins to convert to aromatics with a catalyst comprising the zeolite and gallium, zinc, or a compound of gallium or zinc.

63. The process of Claim 18 wherein the process is a process for isomerizing olefins comprising contacting said olefin under conditions which cause isomerization of the olefin with the catalyst.

64. The process of Claim 18 wherein the process is a process for isomerizing an isomerization feed comprising an aromatic C_8 stream of xylene isomers

or mixtures of xylene isomers and ethylbenzene, wherein a more nearly equilibrium ratio of ortho-, meta- and para-xylenes is obtained, said process comprising contacting said feed under isomerization conditions with the catalyst.

65. The process of Claim 18 wherein the process is a process for oligomerizing olefins comprising contacting an olefin feed under oligomerization conditions with the catalyst.

66. A process for converting lower alcohols and other oxygenated hydrocarbons comprising contacting said lower alcohol or other oxygenated hydrocarbon under conditions to produce liquid products with a catalyst comprising a zeolite having a mole ratio greater than about 20 of an oxide of a first tetravalent element to an oxide of a second tetravalent element which is different from said first tetravalent element, trivalent element, pentavalent element or mixture thereof and having, after calcination, the X-ray diffraction lines of Table II.

67. In a process for the reduction of oxides of nitrogen contained in a gas stream in the presence of oxygen wherein said process comprises contacting the gas stream with a zeolite, the improvement comprising using as the zeolite a zeolite having a mole ratio greater than about 20 of an oxide of a first tetravalent element to an oxide of a second tetravalent element which is different from said first tetravalent element, trivalent element, pentavalent element or mixture thereof and having, after calcination, the X-ray diffraction lines of Table II.

68. The process of Claim 67 wherein said zeolite contains a metal or metal ions capable of catalyzing the reduction of the oxides of nitrogen.

69. The process of Claim 68 wherein the metal is copper, cobalt or mixtures thereof.

70. The process of Claim 68 wherein the gas stream is the exhaust stream of an internal combustion engine.